

SECOND SUBSTITUTE SPECIFICATION

**MOTOR VEHICLE WIPER COMPRISING A WEAR INDICATOR**

**BACKGROUND**

- [0001] This invention concerns the wiping means of the windows of motor vehicles and, more specifically, their wear.
- [0002] A wiper blade equipped with its elastic wiper stem is a piece of the vehicle that wears out and which must be replaced regularly if one wants to guarantee a good wiping quality of the window. This proves to be even more important for the driving safety while one is using the wiper blade on the front windshield of the vehicle.
- [0003] The sources of wear are numerous and the blade is susceptible to degrading as much at the level of the wiper stem as at the joints and the articulation mount that carries it.
- [0004] For example, the wiper stem is susceptible to wear via friction but can also wear due to the deterioration of the material that it is made of.
- [0005] The agents of such deterioration are principally:
- [0006] - sun light, and more specifically, ultraviolet rays that light contains;
- [0007] - oxygen because, even if the vehicle is normally parked in a closed garage, and thus sheltered from sunlight, it cannot be sheltered from oxidation;
- [0008] - temperature, variations of temperature, and humidity;
- [0009] - ozone and all electromagnetic radiation from the environment.
- [0010] Thus, it appears to be pertinent to determine the lifespan of the wiper blade as a function of its time exposed to the air.
- [0011] In addition, frequently drivers are incapable of remembering when they last changed their wiper blades. In effect, such an operation is not generally entrusted to a vehicle repair specialist who can, for example, proceed to a systematic, regular replacement of the blades.
- [0012] It is known, for example, from application WO/01896, to use wear indicators that change color as a result of exposure to the environment. This type of

Approved for Bnt  
GAG  
3-31-04